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## Lahontan Regional Water Quality Control Board

June 24, 2013

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Pacific Gas and Electric Company  
3401 Crow Canyon Road  
San Ramon, CA 94105-1814

### **HYDRAULIC CAPTURE MONITORING REPORTS COMPLIANCE, PACIFIC GAS AND ELECTRIC COMPANY (PG&E), HINKLEY COMPRESSOR STATION, SAN BERNARDINO COUNTY, AMENDED CLEANUP AND ABATEMENT ORDER (CAO) NO. R6V-2008-0002A3**

This letter acknowledges PG&E's compliance with demonstrating hydraulic capture of the chromium plume south of Thompson Road during the months of February, March, and April 2013, pursuant to amended CAO R6V-2008-0002A3.

#### **Background**

On March 14, 2012, the Lahontan Water Board (Water Board) adopted amended CAO No. R6V-2008-0002A3 as part of settlement negotiations for violations of prior Board Orders. The amended CAO requires PG&E to demonstrate monthly chromium plume capture in groundwater south of Thompson Road. Demonstration shall be achieved by showing inward hydraulic flow gradients in the shallow zone and deep zone of the upper aquifer using prescribed well pairs and triplets.

PG&E submitted hydraulic capture monitoring reports for the months of February, March, and April 2013. Using monthly average groundwater elevation data, these reports show inward hydraulic gradient for prescribed well pairs and triplets with the exception of well pairs MW-55S/MW-86S and MW-68S/DW-03, and well triplet MW-32S/MW-87S/MW-88S. Groundwater elevation data collected from these latter wells show an outward hydraulic gradient, suggesting no plume capture at those locations.

The amended CAO allows PG&E to submit additional data and to propose alternate metrics in monitoring reports that may help to demonstrate chromium plume capture. The monitoring reports for the three months mentioned above also contain a geologic cross-section across the northern portion of plume capture. Fine-grained layers at shallow depths in the upper aquifer beneath the Cottrell field are depicted in the cross section as creating perched water responsible for outward hydraulic gradients in the chromium plume. While this additional data show that groundwater elevation is higher within the plume at the Cottrell field, overall plume capture is being achieved on the

margins due to lower water elevation caused by pumping at extraction wells. This information indicates that hydraulic capture of the chromium plume is being achieved and preventing migration in accordance with requirements in the amended CAO. In the monitoring report for April 2013 hydraulic capture, PG&E proposes alternate metrics involving five sets of larger well triplets for demonstrating hydraulic capture on a temporary basis when perched water is present within the Cottrell agricultural field.

## Response

I believe that PG&E has adequately demonstrated hydraulic capture of the chromium plume in groundwater south of Thompson Road based on information submitted in the February, March, and April 2013 Hydraulic Capture monitoring reports. In addition, hydraulic capture is supported by data indicating that the chromium plume did not significantly increase in concentration or expand in size north of Thompson Road. Therefore, I find PG&E to be in compliance with hydraulic capture requirements in amended CAO R6V-2008-0002A3 during February, March, and April 2013.

I am not, at this time, approving PG&E's request to use alternate metrics for demonstrating hydraulic capture in the future. The proposed metrics are significantly different in size and location than those originally proposed by PG&E and established in the amended CAO. PG&E may continue to submit additional data in monthly monitoring reports to assist in demonstrating hydraulic capture of the chromium plume in groundwater to demonstrate compliance with the amended CAO. Water Board staff will conduct monthly evaluations of the data to verify compliance.

This notification of compliance and evidence of hydraulic capture is limited to the geographic area of the plume south and in the vicinity of Thompson Road. The Water Board has not concluded that hydraulic capture is effective in the vicinity of the freshwater injection wells at this time.

If you should have any questions, please contact Lauri Kemper at (530) 542-5436 ([lkemper@waterboards.ca.gov](mailto:lkemper@waterboards.ca.gov)) or Lisa Dernbach at (530) 542-5424 ([ldernbach@waterboards.ca.gov](mailto:ldernbach@waterboards.ca.gov)).



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